

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003387**Date Inspected:** 20-Jul-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yanhua/Jiang Jian Fei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG/Tower**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Roscoe Dixon was present at the time requested to randomly observe welding and associated operations being performed for the Orthotropic Box Girders (OBG).

Bay 3 – Heavy Duty Machinery Shop

The QA Inspector observed ZPMC qualified welder Dong Yi Qun ID 059450 utilizing WPS-345-FCAW-2G (2F) Repair to perform Flux Core Arc Welding (FCAW) repairs of deck panel Partial Joint Penetration (PJP) welds on DP191-001.

The QA Inspector Dixon was informed by ZPMC QC Inspector Mr. Wang Lu that ZPMC CWI Inspectors, Li Yah Hua and ABF Inspectors Kevin Chen were about to perform an initial three party visual repair inspection on deck panels DP432-001, DP082-001 and DP326-002. Mr. Lu Then requested that a Caltrans QA Inspector also performed a visual inspection on the deck panels.

After an agreement was reached by all parties on the repairs which had been completed on the deck panels the QA Inspector assigned Caltrans lot number B59 and the inspection date on the yellow tag which is pasted to the outside U-Ribs of the deck panels. The ABF and ZPMC personnel also signed and dated the tag indicating the inspection had been completed.

The ABF Inspector Kevin Chen informed the QA Inspector that the two deck panels listed above would be removed from the Heavy Machinery Shop Bay # 3 and transported to the Assembly shop.

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The deck panel repairs and welding in the progress generally appeared to conform to contract specifications.

Tower Bay # 1

The QA Inspector observed that no welding was being performed in this shop by ZPMC for the SFOBB project.

The QA Inspector observed ZPMC personnel heating areas on skin plate C at areas which had been traced out in chalk for heat straightening.

Tower Bay # 2

The QA Inspector observed ZPMC qualified and approved welder Li Ming Yang # 046706 performing Flux Cored Arc Welding (FCAW) to weld the root pass for the Complete Joint Penetration (CJP) butt weld of the longitudinal stiffener skin plates(B2)weld joint ESD1-SA49 A/D 4A (4B).

The ZPMC Certified Welding Inspector (CWI) Jiang Jian Fei and various assistant welding Inspectors were monitoring the welding parameters.

The QA Inspector verified the welding machine amperage, voltage and filler metal per the Welding Procedure Specifications (WPS) which was posted at the welding station. The CWI identified the WPS being used to perform the welding as WPS-B-T-2231-B-U3-F.

The QA Inspector randomly observed ZPMC Welding Operator Xue Yian ID 040634 utilizing the Submerged Arc Welding (SAW Process with ZPMC Weld Procedure Specifications (WPS) B-T-2321-B-U3-C-S-2 to weld the fill passes for skin plate (B1) complete joint penetration (CJP) butt weld joint identified by ZPMC as weld joint ESD1-SA49A/D-29A.

The QA Inspector visually verified a single electrode was being utilized for the filler passes, and the filler metal being used was JW-3 with a diameter of 4.8 millimeters. The Skin plate has both 90mm thick plate and 60mm thick plate. The material grade is identified as 345+345.

The QA Inspector observed that during the shift ZPMC CWI, Jiang Jian Fei and ZPMC CAWI Inspectors were monitoring the electrical parameters, travel speed and weld interpass temperatures at this welding station.

The welding in progress appeared to comply with the above listed WPS and the requirements of this contract.

Summary of Conversations:

As noted within the report shown above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By: Dixon,Roscoe

Quality Assurance Inspector

Reviewed By: Lanz,Joe

QA Reviewer